



## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2002P11786WO	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/DE2003/002991	International filing date ( <i>day/month/year</i> ) 09 September 2003 (09.09.2003)	Priority date ( <i>day/month/year</i> ) 14 October 2002 (14.10.2002)
International Patent Classification (IPC) or national classification and IPC H05K 7/14		
Applicant SIEMENS AKTIENGESELLSCHAFT		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 7 sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand 02 April 2004 (02.04.2004)	Date of completion of this report 30 July 2004 (30.07.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE2003/002991

## I. Basis of the report

1. This report has been drawn on the basis of (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

 the international application as originally filed. the description, pages \_\_\_\_\_, as originally filed,pages 3-21, filed with the demand,pages 1, 2, 2a, filed with the letter of 15 July 2004 (15.07.2004),

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

 the claims, Nos. \_\_\_\_\_, as originally filed,

Nos. \_\_\_\_\_, as amended under Article 19,

Nos. \_\_\_\_\_, filed with the demand,

Nos. 1-18, filed with the letter of 15 July 2004 (15.07.2004),

Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

 the drawings, sheets/fig 1/17-17/17, as originally filed,

sheets/fig \_\_\_\_\_, filed with the demand,

sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_,

sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

2. The amendments have resulted in the cancellation of:

 the description, pages \_\_\_\_\_ the claims, Nos. \_\_\_\_\_ the drawings, sheets/fig \_\_\_\_\_

3.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

International application No.

PCT/DE 03/02991

**I. Basis of the report**

1. This report has been drawn on the basis of (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

The amendments submitted with the letter of 15 July 2004 do not introduce substantive matter that goes beyond the disclosure in the international application as filed and therefore meet the requirements of PCT Article 34(2) (b).

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE 03/02991

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	1-18	YES
	Claims		NO
Inventive step (IS)	Claims	1-18	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-18	YES
	Claims		NO

**2. Citations and explanations**

Reference is made to the following documents:

D1: US-A-5 272 593 (JAKOB GERT ET AL) 21 December  
1993 (1993-12-21)

D2: US-A-4 785 379 (GOODRICH MELVILLE A) 15 November  
1988 (1988-11-15)

Document D1 is considered the prior art closest to the subject matter of claim 1 and discloses (the references between parentheses refer to that document):

A method for assembling a circuit module, in which a circuit board (10) is introduced into the main body of a housing (41) with the flat sides of the board facing the walls of the housing, the main body of the housing being sealed with the aid of cover elements (37).

The subject matter of claim 1 thus differs from the known method in that an elongated pressure pad is introduced between the circuit board and the main body of the housing, the pressure pad applying a compressive force to one of the flat sides of the

circuit board.

Although the arrangement as per D1 comprises a pressure pad (49), the compressive force is not applied to one of the flat sides of the circuit board, but to a cooling frame (11) behind. In addition, the pressure pad is secured in the main body of the housing and therefore is not introduced between the circuit board and the main body of the housing.

The subject matter of claim 1 is thus novel (PCT Article 33(2)).

The present invention can therefore be considered to address the problem of securing the circuit board in the main body of the housing.

The solution to this problem proposed in claim 1 of the present application involves an inventive step (PCT Article 33(3)), since the other documents cited in the search report contain nothing to indicate the specific solution as per claim 1. Document D2 discloses a method in which a pressure pad presses directly on the flat side of a circuit board, but the pressure pad is also secured in the main body of the housing and is not introduced between the circuit board and the holder.

Claims 2 to 17 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step. Claim 18 concerns a circuit module that can be produced using a method according to claim 1. Since the circuit module has all the technical features of the solution to the

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

International application No.

PCT/DE 03/02991

aforementioned problem, this claim also meets the PCT requirements in respect of novelty and inventive step.